

were both common; *A. punctigerum* and *A. aethiops* very local, but common, were found. From *Lotus major* the very distinct *A. ebenium* was taken freely; also more rarely off *L. corniculatus*. *A. pilirostre* was common on *Medicago lupulina*: wherever the medick grew it seemed to harbour the beetle. *A. striatum*, *A. ononis*, *A. erri*, and *A. spencei* were all common; *A. vorax* was decidedly rare, only two specimens being taken. *A. unicolor* and *A. gyllenhali* were both common on *Vicia cracca*; this southern record for *A. gyllenhali* is interesting. Sweeping melilot produced *A. meliloti*; the plant is common in numerous places around Ditchling, but the beetle is singularly restricted in its distribution. *A. scutellare*, *A. livercerum*, *A. loti*, *A. seniculum*, and *A. tenue* were all found on their customary foodplants; *A. livercerum* was very scarce, only about half-a-dozen to a field of sainfoin. *A. pubescens* was rare; a few examples taken by sweeping long grass. *A. marchicum*, *A. violaceum*, *A. hydrolypathi*, and *A. humile* were frequently taken; *A. marchicum* seems to like chalk downs as much as "sandy places." Although many of the above-mentioned records are of common, or moderately common, species, I yet think this note justified on the score of quantity alone (if not on that of quality) of the species mentioned.

Glands of Pierid Larvæ.

By J. W. HARRISON, B.Sc.

I have been rearing large broods of *Pieris rapae* and *Pieris mannii* larvæ. In handling them I noted that they often threw back their heads in a manner suggestive of *Odontotia camelina*. As I had lately discovered that *O. camelina* did this in order to throw out eversible glands similar to those found in *Cerura vinula*, I thought that this act of the *Pieris* might be for a similar reason, and I was not disappointed for I was successful in seeing the glands protruded in a full-grown larva of *P. mannii*.

The glands are protruded from the underside of the neck. They are greatly different from those seen in *Odontotia camelina*, *Notodonta ziczac*, etc., for these bifurcate glands take their origin in a single transverse slit. On the contrary the glands in *P. mannii*, when not protruded, are visible externally as two small sucker-like marks, one on each side of the neck. The glands themselves, instead of being forked, like those of the Notodontids, are globular, and, as noted before, are not connected at the base. In appearance they remind one of a gooseberry, or, better still, a seed of *Galium aparine*. They are green in colour and rugged. This ruggedness is caused by the large number of minute points which cover them. Although described as globular they are slightly curved inward and downward at the tips. In size they have a diameter equal to half the breadth of the neck. I could detect no liquid or scent thrown out, but it does not follow that no scent was produced, for the senses of insects are not those of human beings.

[Mr. Harrison has struck here a very interesting line of observation. The glands are the well-known "chin-glands" of Buckler, Chapman, etc. Some years ago we dealt with these peculiar eversible glands (*Nat. Hist. Brit. Lep.*, i., p. 34; viii., pp. 18, 22) and pointed out, among other details, the peculiar fact that they seemed to be confined to the super-families of our Noctuo-Papilionid stirps. They are common to

Lymantriids, Noctuids, Notodontids, and Papilionids, *i.e.*, to the upright-egged superfamilies of the lepidoptera. Although there are many observations on these peculiar structures, the differences in detail in the various superfamilies have not yet been at all satisfactorily worked out. That they are remnants of offensive or defensive structures appears certain.—Ed.]

Lepidopterological Notes in 1908.

By CECIL FLOERSHEIM, B.A., F.E.S.

SPRING LEPIDOPTERA AT NERVI.—At Nervi, a few miles east of Genoa, I noticed the following species of Rhopalocera during four days spent there in the May of the present year. *Iphiclides podalirius* on the wing and ovipositing May 22nd. *Papilio machaon* larva on fennel, second instar, May 20th. *Pyrameis atalanta* imagines abundant and in perfect condition, May 20th and 23rd. *Pieris brassicae*, full-grown larva, May 24th.

LARVAL HABIT OF NEMEOBIUS LUCINA.—The larva of *Nemeobius lucina*, anyhow in its later stages, seems to feed entirely by night, and hides amongst the withered leaves of primrose, with which its colour harmonizes exactly by day.

PUPATION-POSITION OF GONEPTERYX RHAMNI.—The few pupæ of *Gonepteryx rhamni*, which I succeeded in finding on *Rhamnus frangula* this year, were all attached to the mid-rib of the undersides of a leaf, with their heads pointing towards the stem.

BUTTERFLY ATTACKED BY BIRD.—In June of the present year I was carrying a specimen of *Euphocades troilus* ♂ to my butterfly-house, when it escaped and settled on some espalier pears close by. As I was hurrying to capture it, a hen blackbird, who had a nest near at hand, swooped down upon it and carried it off, still fluttering, to her young with a cluck of triumph. I thought this might be of interest, in view of the rare occasion upon which birds are seen to attack butterflies in this country.

PAIRING HABIT OF DRYAS PAPHIA.—*Dryas paphia* pairs after a short courtship on the wing, the female then settling on some bush and fanning her expanded wings in the sunshine, copulation taking place *in situ* without further flight. Other males often attempt to pair with the already mated female whilst *in copulâ*, upon which the couple already paired fly off, with the male dependent, as I have observed in *Epinephele janira* and other *Satyrinae*. The female often keeps her wings expanded to the sunshine whilst *in copulâ*, but I have not observed the male doing so. Pairing generally happens between half-past eight and half-past eleven on fine mornings, separation taking place during the afternoon. From the number of butterflies I observed *in copulâ* in my house, many of which were worn ones, I should say that the female of *Dryas paphia* probably pairs more than once; I will try to ascertain this for certain next year.

OVIPOSITION OF DRYAS PAPHIA.—*Dryas paphia* begins to lay its eggs from about a fortnight to three weeks after emergence. I watched the females this year depositing their ova on or about the following: crevices in the trunk of a willow tree, wintered flower-heads of spur-valerian, upper- and undersurface of leaves of *Aristolochia siphon*, lino of sides of butterfly-house, faded flowers of pansy, and even on pansies and violets, the foodplants themselves. Several times the female I was